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FACSIMILE COVER SHEET

To: Sr. Examiner C. Church
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Date: December 21, 1998
Pages includ. this Cover page: 1

Message:

Re: Patent Application 08/924,497

Dear Sir:

Please exchange page 5 in my Fax at December 20, 98 to attached correct one. Sorry about mistakes.

Thank you very much again.

Oleg Sokolov

D. Sokolov. Patent Application 08/924,497

Regarding paragraph 3 page 2 Applicant has respectfully to note:

Under the objection of Examiner Applicant amended claims and took off diagonals of cells not parallel nor perpendicular to longitudinal side of the grid.

Applicant has respectfully to note that direction of movement of grid parallel to longitudinally side of grid has support in drawing Fig. 1 of original application.

On Examiner's objection that during movement the flat focused grid will block all or almost all primary X-ray applicant respectfully has been submitted next calculations:

Mostly grids move onto distance 5 and 10 mm to each side from central beam which is perpendicular from focal point to surface of grid ~~for mammography grid with focus distance 750 mm and length 250 mm of longitudinally extended side, and 10 mm~~ for general purpose grid with focus distance 1000 mm and length 500 mm accordingly. Therefore for end positions of grids (which are small component of dynamic positions of grid during it movement) trigonometry calculations give the result for the blocking of primary radiation from 2 % (for grids with ratio 4) till 12 % (for grid with ratio 12 - max. ratio for cellular Grids).

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Integrated loosing (or blocking) of primary radiation during the movement of grid defines by formula (1):

% of loosing (or blocking) of primary radiation : $\int_0^S \frac{dx}{X} \cdot 100\%$ where S=5 and 10 mm (1) is % of loosing primary on end positions

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Computing of trigonometric data gives the result from .69 % for grids with ratio 4 and movement 5 mm (.197 in.) to 2.48 % for grids with ratio 12 and movement 10 mm (.394 in). Therefore practically any loosing of primary radiation and following increasing of dose doesn't come with moving of grid during the X-ray procedure in today's technology.

Applicant has respectfully to note that all contemporary X-ray machines in the world for conventional medical x-ray technology are supplied by Bucky mechanisms for movement of grids in which using grids have been installed. Without these today's x-ray medical technology can't work.

Caldwell

Caldwell's reference discloses **a radially focused circular x-ray grid** that is composed of simple thin lead strips (lead is only soft x-ray absorbent but not construction material and it can't keep the configuration of strips), the strips on the side view are the parts of the radiuses from the focus of grid and they have the uniform length as result this grid cannot provide required sharpness of x-ray images, Caldwell's grid having cells for the transmission of the X-rays with sides oriented about 45 degrees to the direction of movement of grid which doesn't provide the erasement of images of cells on the mentioned x-ray images. Caldwell does not suggest like in current application or even imply the **hypotenusely oriented flat cellular grid** where on the side view the thin partitions (Caldwell calls them strips) between cells have the different length